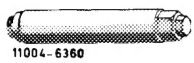
03–008 Assessment of cylinder bores

Tightening torques	Nm	(kpm)
Cap nuts for injection lines	25	(2.5)
Bolts for valve cover (engine 615)	5	(0.5)
Nuts for valve cover (engines 615, 616, 617)	15	(1.5)
Screw collar for precombustion chamber in cylinder head	150–180	(15–18)
Injection nozzle in precombustion chamber	70–80	(7–8)

Special tools

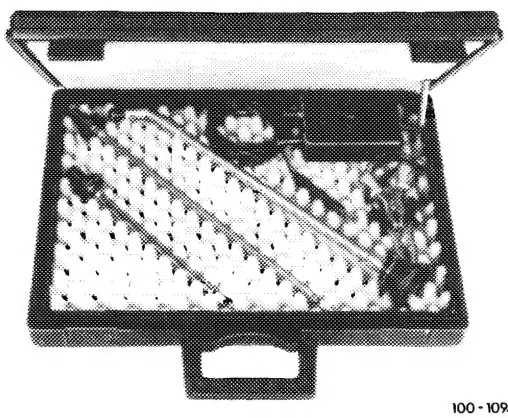
Box-wrench socket open, 17 mm, 1/2" drive for injection lines	 11004-6359	000 589 68 03 00
Socket 27 mm, 1/2" drive	 11004-6363	001 589 65 09 00
Pin wrench for screw collar of precombustion chamber	 11004-6360	615 589 00 07 00
Extractor for precombustion chambers	 11004-6365	615 589 00 33 00

Commercially available tool

Cylinder inspection lamp	e. g. Autoskop TW 8/330 and TW 8/190 Franz Welger, Südstrasse 9, 3280 Bad Pyrmont e. g. Aviaskop, SWV 120 L Karlheinz Hinze, Elbgaustrasse 112, 2000 Hamburg 53

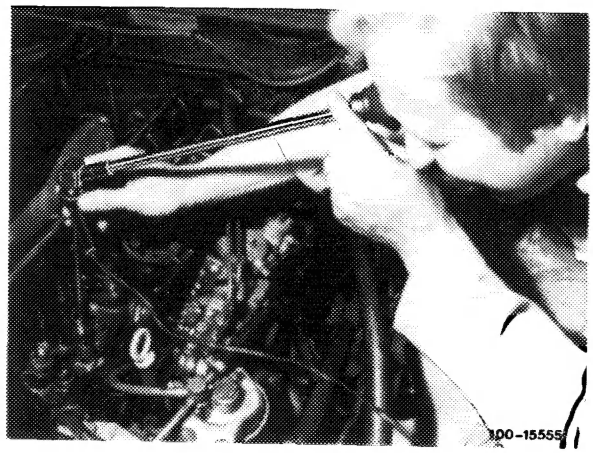
Note

A visual inspection is to be carried out with a cylinder inspection lamp, the cylinder head being in situ. To do so, first remove the precombustion chambers (05–117).



100-10948

Workshops often find it difficult to assess whether a scored or streaky cylinder liner is so seriously damaged that the engine needs removing or repairing or whether the marks are insignificant. The following notes are intended to help you make a correct, professional decision.



First examine cylinder liner marks to distinguish between "optical streaks" and "seizing marks". "Optical streaks" are normally up to 3 mm wide. They are due to the ring gap but still show signs of honing. In contrast, "seizing marks" make the honing traces disappear completely.

"Streaks at the land side" (in the direction of the piston pin) cannot be due to piston skirt slurring or seizing because there are no points of contact between the piston skirt and cylinder liner.